



March 15, 2011

Duke Energy
Miami Fort Generating Station
11021 Brower Road
North Bend, OH 45052

Attention: Ms. Sue Wallace
Chemical Engineer

Re: Results – **March 2011**
Low-Level Mercury Sampling
Miami Fort Generating Station
North Bend, Ohio

In accordance with your request, URS prepared the following letter report transmitting low-level mercury test results for samples collected at the Miami Fort Generating Station located in North Bend, Ohio.

The scope of work involved the sampling of intake and discharge waters from the following sources and analysis of those samples for low-level mercury.

1. River Intake
2. Station 601 (WWT Influent)
[Samples were collected at this station one detention time before samples collected at Outfall 608]
3. Outfall 608 (WWT Effluent)
[Samples were collected at this outfall one detention time after samples collected at station 601]
4. Outfall 002 (Pond B Discharge)

Each sample was collected following the required Method 1669: *Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels* (Sampling Method) and analyzed by Method 1631. At the request of Duke Energy, total metal mercury samples were collected from Station 601 and analyzed by Method 7470A. Also at the request of Duke Energy, a dissolved low-level mercury sample was collected by Method 1669 from Outfall 608 and analyzed by Method 1631. The collected dissolved sample was filtered at the laboratory utilizing 0.45 micron filtration.

Field staff from URS' Cincinnati office conducted the sampling and TestAmerica Laboratories Inc. located in North Canton, Ohio performed the analytical procedures. The analytical procedures included the analyses of a collected sample and duplicate sample (duplicates collected at Outfall 608 and Outfall 002), field blank (field blanks collected at the River Intake, Outfall 608, and Outfall 002), and trip blank.



Duke Energy - MFS
March 15, 2011
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The results from the **March 1 and 2, 2011** sampling event are presented in the attached Table 1. A copy of the laboratory report is enclosed with this letter.

--ooOoo--

URS is pleased to provide continued assistance to Duke Energy in the execution of their environmental monitoring requirements. If there are any questions regarding the content of this report, please do not hesitate to contact the undersigned.

Sincerely,

URS Corporation

A handwritten signature in blue ink, appearing to read "Michael A. Wagner", is positioned above the printed name.

Michael A. Wagner
Project Manager

A handwritten signature in blue ink, appearing to read "Dennis P. Connair", is positioned above the printed name.

Dennis P. Connair, C.P.G.
Principal

MAW/DPC/Duke Energy-MFS LL Hg 2011
Job No. 14949813

TABLE 1
ANALYTICAL RESULTS
LOW-LEVEL MERCURY
RIVER INTAKE, STATION 601, OUTFALL 608, AND OUTFALL 002 (POND B)
DUKE ENERGY - MIAMI FORT STATION
NORTH BEND, OHIO

Sample ID	Date Sampled / Results (ng/L, parts per trillion)						
	9/1/10	10/4/10	11/1/10	12/1/10	1/5/11	2/1/11	3/1/11
River Intake	0.86	1.1	1.1	3.0	9.7	2.1	15.4
Station 601 (7)	391,000	187,000	408,000	380,000	315,000	88,200	22,500
Station 601 (7)*	8,600	23,200	350,000	494,000	6,100	7,600	2,500
Station 601 (7)* [duplicate]	Not Collected	Not Collected	378,000	489,000	6,100	Not Collected	4,100
Station 601 (8)	428,000	285,000	247,000	184,000	UDFS	101,000	38,400
Station 601 (8)*	8,300	30,600	104,000	490,000	UDFS	4,300	4,700
Station 601 (8)*[duplicate]	Not Collected	28,400	Not Collected	Not Collected	UDFS	3,600	Not Collected
Outfall 608	631	440	248	345	97.2	428	180
Outfall 608 [duplicate]	650	449	254	333	102	420	191
Outfall 608 [dissolved, 0.45 micron]	83	70	124	81.7	0.91	40.8	3.7
APB-002	2.3	3.1	2.9	4.0	3.8	5.3	3.7
APB-002 [duplicate]	1.9	2.8	3.0	3.6	3.4	5.0	4.1
Field Blank (RI-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3
Field Blank (WWT-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Field Blank (AP-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trip Blank	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Samples collected by URS

Samples analyzed by TestAmerica of North Canton, Ohio

NSC - No Sample Collected (Unit's wastewater was not being processed at the time of sample collection)

UDFS - Unit down for service, no samples collected.

* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]

ANALYTICAL REPORT

PROJECT NO. 14949813

DUKE MF 2011 LLHG

Lot #: A1C030434

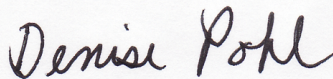
Sue Wallace

Duke Energy Corporation

PO Box 5385

Cincinnati, OH 45201

TESTAMERICA LABORATORIES, INC.



Denise Pohl

Project Manager

denise.pohl@testamericainc.com

Approved for release.
Denise Pohl
Project Manager
3/14/2011 9:30 AM

March 14, 2011

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com



CASE NARRATIVE

A1C030434

The following report contains the analytical results for fourteen water samples and one quality control sample submitted to TestAmerica North Canton by Cinergy from the DUKE MF 2011 LLHG Site, project number 14949813. The samples were received March 03, 2011, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Candance Bonham, Mike Wagner, and Sue Wallace on March 11, 2011. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 11.6°C.

See TestAmerica's Cooler Receipt Form for additional information.

METALS

Matrix spike recovery and relative percent difference (RPD) data were not calculated for some analytes for 608 WWT due to the sample concentration reading greater than four times the spike amount. See the Matrix Spike Report for the affected analytes which will be flagged with "NC, MSB".

The matrix spike/matrix spike duplicate(s) for batch(es) 1066199 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called Quality Control Batches (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a Method Blank (MB), a Laboratory Control Sample (LCS) and, a Matrix Spike/Matrix Spike Duplicate (MS/MSD) pair or a Matrix Spike/Sample Duplicate (MS/DU) pair.

For 600 series/CWA methods, QC samples include a Method Blank (MB), a Laboratory Control Sample (LCS) and, where appropriate, a Matrix Spike (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch, with the exception of poor performing analytes. A list of these analytes is listed below. No corrective action is taken if these analytes do not meet criteria. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

Poor performers

Method 8270 Water and Solid:	
4-Nitrophenol	3,3' - Dichlorobenzidine
Benzoic Acid	2,4,6 - Tribromophenol
Phenol	2,4-Dinitrophenol
Phenol-d5	Pentachlorophenol
4,6-Dinitro-2-methylphenol	Hexachlorocyclopentadiene (LCG only)
Benzyl Alcohol	4-Chloroaniline
Method 8151 Solid	
Dinoseb	
Method 8260 Water and Solid	
Dichlorodifluoromethane	Hexachlorobutadiene
Trichlorofluoromethane	Naphthalene
Chloroethane	1,2,3-Trichlorobenzene
Acetone	1,2,4-Trichlorobenzene
Bromomethane	2,2-Dichloropropane
Bromoform	Chloromethane

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be ten fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results do not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate or Matrix Spike/Sample Duplicate.

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater. For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),

Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), DoD ELAP (ADE-1437) USDA Soil Permit (P33-08-00123)

EXECUTIVE SUMMARY - Detection Highlights

A1C030434

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
RI FB 03/01/11 17:40 001				
Mercury	1.3	0.50	ng/L	CFR136A 1631E
RI 03/01/11 17:45 002				
Mercury	15.4	5.0	ng/L	CFR136A 1631E
601 (7) WWT 03/01/11 18:15 003				
Mercury	22500	5000	ng/L	CFR136A 1631E
601 (7) WWT TOT 03/01/11 18:20 004				
Mercury	2.5	0.20	ug/L	SW846 7470A
601 (7) WWT TOT DUP 03/01/11 18:25 005				
Mercury	4.1	0.20	ug/L	SW846 7470A
601 (8) WWT 03/01/11 18:30 006				
Mercury	38400	5000	ng/L	CFR136A 1631E
601 (8) WWT TOT 03/01/11 18:35 007				
Mercury	4.7	0.20	ug/L	SW846 7470A
608 WWT 03/02/11 08:15 010				
Mercury	180	5.0	ng/L	CFR136A 1631E
608 WWT DUP 03/02/11 08:20 011				
Mercury	191	5.0	ng/L	CFR136A 1631E
608 WWT DISS 03/02/11 08:25 012				
Mercury - DISSOLVED	3.7	0.50	ng/L	CFR136A 1631E
OUTFALL 002 03/02/11 08:55 014				
Mercury	3.7	0.50	ng/L	CFR136A 1631E

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A1C030434

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
OUTFALL 002 DUP 03/02/11 09:00 015				
Mercury	4.1	0.50	ng/L	CFR136A 1631E

ANALYTICAL METHODS SUMMARY

A1C030434

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Mercury, Low Level Mercury, CVA Fluorescence	CFR136A 1631E

References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A1C030434

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ME498	001	RI FB	03/01/11	17:40
ME499	002	RI	03/01/11	17:45
ME5AC	003	601 (7) WWT	03/01/11	18:15
ME5AE	004	601 (7) WWT TOT	03/01/11	18:20
ME5AG	005	601 (7) WWT TOT DUP	03/01/11	18:25
ME5AJ	006	601 (8) WWT	03/01/11	18:30
ME5AL	007	601 (8) WWT TOT	03/01/11	18:35
ME5AM	008	TRIP BLANK	03/01/11	
ME5AN	009	608 WWT FB	03/02/11	08:10
ME5AP	010	608 WWT	03/02/11	08:15
ME5AR	011	608 WWT DUP	03/02/11	08:20
ME5AT	012	608 WWT DISS	03/02/11	08:25
ME5AV	013	OUTFALL 002 FB	03/02/11	08:50
ME5AX	014	OUTFALL 002	03/02/11	08:55
ME5A1	015	OUTFALL 002 DUP	03/02/11	09:00

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Duke Energy Corporation

Client Sample ID: RI FB

TOTAL Metals

Lot-Sample #...: A1C030434-001

Matrix.....: WQ

Date Sampled...: 03/01/11 17:40 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1066199					
Mercury	1.3	0.50	ng/L	CFR136A 1631E	03/04-03/09/11	ME4981AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: RI

TOTAL Metals

Lot-Sample #...: A1C030434-002

Matrix.....: WG

Date Sampled...: 03/01/11 17:45 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066199						
Mercury	15.4	5.0	ng/L	CFR136A 1631E	03/04-03/08/11	ME4991AA

Dilution Factor: 10

Duke Energy Corporation

Client Sample ID: 601 (7) WWT

TOTAL Metals

Lot-Sample #...: A1C030434-003

Matrix.....: WG

Date Sampled...: 03/01/11 18:15 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066199						
Mercury	22500	5000	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AC1AA

Dilution Factor: 10000

Duke Energy Corporation

Client Sample ID: 601 (7) WWT TOT

TOTAL Metals

Lot-Sample #...: A1C030434-004

Matrix.....: WG

Date Sampled...: 03/01/11 18:20 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1063012						
Mercury	2.5	0.20	ug/L	SW846 7470A	03/04-03/09/11	ME5AE1AA

Dilution Factor: 1

Duke Energy Corporation

Client Sample ID: 601 (7) WWT TOT DUP

TOTAL Metals

Lot-Sample #...: A1C030434-005

Matrix.....: WG

Date Sampled...: 03/01/11 18:25 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1063012						
Mercury	4.1	0.20	ug/L	SW846 7470A	03/04-03/09/11	ME5AG1AA

Dilution Factor: 1

Duke Energy Corporation

Client Sample ID: 601 (8) WWT

TOTAL Metals

Lot-Sample #...: A1C030434-006

Matrix.....: WG

Date Sampled...: 03/01/11 18:30 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066199						
Mercury	38400	5000	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AJ1AA
		Dilution Factor: 10000				

Duke Energy Corporation

Client Sample ID: 601 (8) WWT TOT

TOTAL Metals

Lot-Sample #...: A1C030434-007

Matrix.....: WG

Date Sampled...: 03/01/11 18:35 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1063012						
Mercury	4.7	0.20	ug/L	SW846 7470A	03/04-03/09/11	ME5AL1AA

Dilution Factor: 1

Duke Energy Corporation

Client Sample ID: TRIP BLANK

TOTAL Metals

Lot-Sample #...: A1C030434-008

Matrix.....: WQ

Date Sampled...: 03/01/11

Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1066199					
Mercury	ND	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AM1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT FB

TOTAL Metals

Lot-Sample #...: A1C030434-009

Matrix.....: WQ

Date Sampled...: 03/02/11 08:10 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1066199					
Mercury	ND	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AN1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT

TOTAL Metals

Lot-Sample #...: A1C030434-010

Matrix.....: WG

Date Sampled...: 03/02/11 08:15 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1066199						
Mercury	180	5.0	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AP1AA

Dilution Factor: 10

Duke Energy Corporation

Client Sample ID: 608 WWT DUP

TOTAL Metals

Lot-Sample #...: A1C030434-011

Matrix.....: WG

Date Sampled...: 03/02/11 08:20 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1066199						
Mercury	191	5.0	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AR1AA

Dilution Factor: 10

Duke Energy Corporation

Client Sample ID: 608 WWT DISS

DISSOLVED Metals

Lot-Sample #...: A1C030434-012

Matrix.....: WG

Date Sampled...: 03/02/11 08:25 Date Received...: 03/03/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	1066199					
Mercury	3.7	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AT1AA

Dilution Factor: 1

Duke Energy Corporation

Client Sample ID: OUTFALL 002 FB

TOTAL Metals

Lot-Sample #...: A1C030434-013

Matrix.....: WQ

Date Sampled...: 03/02/11 08:50 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1066199						
Mercury	ND	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME5AV1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002

TOTAL Metals

Lot-Sample #...: A1C030434-014

Matrix.....: WG

Date Sampled...: 03/02/11 08:55 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1066199						
Mercury	3.7	0.50	ng/L	CFR136A 1631E	03/04-03/09/11	ME5AX1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002 DUP

TOTAL Metals

Lot-Sample #...: A1C030434-015

Matrix.....: WG

Date Sampled...: 03/02/11 09:00 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 1066199						
Mercury	4.1	0.50	ng/L	CFR136A 1631E	03/04-03/09/11	ME5A11AA
		Dilution Factor: 1				

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A1C030434

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A1C040000-012 Prep Batch #... : 1063012						
Mercury	ND	0.20	ug/L	SW846 7470A	03/04-03/09/11	ME6R11AT
Dilution Factor: 1						

MB Lot-Sample #: A1C070000-199 Prep Batch #... : 1066199						
Mercury	ND	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME9TW1AA
Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A1C030434

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A1C070000-199 Prep Batch #... : 1066199						
Mercury	ND	0.50	ng/L	CFR136A 1631E	03/04-03/08/11	ME9TW1AD
Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C030434

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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LCS Lot-Sample#: A1C040000-012 Prep Batch #...: 1063012

Mercury	94	(81 - 123)	SW846 7470A	03/04-03/09/11	ME6R11CC
Dilution Factor: 1					

LCS Lot-Sample#: A1C070000-199 Prep Batch #...: 1066199

Mercury	88	(77 - 125)	CFR136A 1631E	03/04-03/08/11	ME9TW1AC
Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A1C030434

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
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LCS Lot-Sample#: A1C070000-199 Prep Batch #...: 1066199

Mercury	88	(77 - 125)	CFR136A 1631E	03/04-03/08/11	ME9TW1AE
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C030434

Matrix.....: WATER

Date Sampled...: 03/02/11 12:25 Date Received...: 03/03/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A1C030508-005 Prep Batch #... : 1063012							
Mercury	96	(69 - 134)			SW846 7470A	03/04-03/09/11	ME5TL1CX
	92	(69 - 134)	4.5	(0-20)	SW846 7470A	03/04-03/09/11	ME5TL1C0
Dilution Factor: 1							

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C030434

Matrix.....: WG

Date Sampled...: 03/02/11 08:15 Date Received...: 03/03/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A1C030434-010 Prep Batch #... : 1066199						
Mercury	NC,MSB	(71 - 125)		CFR136A 1631E	03/04-03/08/11	ME5AP1AC
	NC,MSB	(71 - 125)	(0-24)	CFR136A 1631E	03/04-03/08/11	ME5AP1AD
Dilution Factor: 10						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD may be outside control limits because the sample amount was greater than 4X the spike amount.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C030434

Matrix.....: WATER

Date Sampled...: 03/02/11 05:00 Date Received...: 03/03/11

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>RPD</u> <u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
MS Lot-Sample #: A1C030500-002 Prep Batch #... : 1066199						
Mercury	157 N	(71 - 125)		CFR136A 1631E	03/04-03/11/11	ME5NT1AC
	132 N	(71 - 125)	7.9 (0-24)	CFR136A 1631E	03/04-03/11/11	ME5NT1AD
		Dilution Factor: 5				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:

Regulatory program:

☐ DW☐ NPDES☐ RCRA☐ Other

Client Contact

Company Name:

Duke Energy

M. Rogers

Site Contact:

Mike Thomas

Lab Contact:

TestAmerica Laboratories, Inc.

COC No:

Address:

City/State/Zip:

Phone:

E-mail:

Project Name:

Project Number:

PO #

Sample Identification

Sample Date

Sample Time

Air

Aqueous

Sediment

Solid

Other:

H2SO4

HNO3

HCl

NaOH

Zn Ac/NaOH

Unpres

Other:

Filtered Sample (Y/N)

Composite-C / Grab-G

Low Level Hg1

Total Hg

Analyses

Sample Specific Notes / Special Instructions:

Possible Hazard Identification

☐ Non-Hazard☐ Flammable☐ Skin Irritant☐ Poison B☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client☒ Dispose By Lab☐ Archive For

Months

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

Retrieved by:

TestAmerica

Test/America Laboratory location: _____

Respiratory program: ☐ DW ☐ NPPES ☐ RCRA ☐ Other _____

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TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A1C030434

Client DUKE ENERGY Project DUKE ME 3011 CCHG By: [Signature]
Cooler Received on 3-3-11 Opened on 3-3-11 (Signature)
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐
TestAmerica Cooler # 1021 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ☐
1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
If YES, Quantity _____ Quantity Unsalvageable _____
Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
Were custody seals on the bottle(s)? Yes ☐ No ☒
If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☐ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other ☐
6. Cooler temperature upon receipt 11.6 °C See back of form for multiple coolers/temps ☐
METHOD: IR ☒ Other ☐
COOLANT: Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☒
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☐ No ☒
Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

High Temp OK for LLHG.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 100110-HNO₃; Sulfuric Acid Lot# 110410-H₂SO₄; Sodium Hydroxide Lot# 100108-NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH₃COO)₂Zn/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
7 TOT	~2	3-3-11	MS
7 TOT DUP	~2		
8 TOT	~2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

Discrepancies Cont'd:

[illegible]

END OF REPORT